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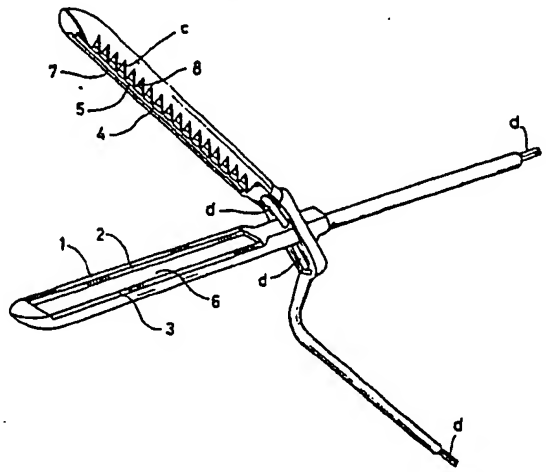
(54) Curly hair correcting iron.

(57) This invention relates to a curly hair correcting iron for correcting natural curly hair into straight hair. The iron comprises two rods (a, b) containing therein heaters, respectively, one rod (a) having its surface provided with spaced two projections (1, 2, 3) which are triangular or semicircular in section, the other rod (b) having its surface likewise provided with projections (4, 5) which are triangular or semicircular in section so as to be positioned between the two projections, whereby when hair is sandwiched therebetween, the hair is curved into U-shape or V-shape, the hair being held and pulled in the direction of the hair end thereby exerting strong drawing, heat and tension on the hair to extend the hair. To dampen pressure, it is preferably that a resilient material (6, 7, 8) is pasted onto the rod surface, and to dampen the action of heat to enhance the efficiency, it is desirable that a heating portion is formed of a material of far infrared radiation.

FIG. 1



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CURLY HAIR CORRECTING IRON

This invention relates to a curly hair correcting iron for correcting natural curly hair into straight hair.

There are people who constitutionally have curly hair by nature, and some of these people desire to correct hair into a straight hair. Heretofore, to correct natural curly hair so-called a natural permanent wave into a straight hair, it is carried out by fixing the drawn-out state of hair under the same principle as the case where hair is pulled so as to draw or squeeze the hair with a heated iron using a permanent liquid to form a wave.

The shape of the iron used for the object as described above include, as shown in section of FIG. 4,

(a) two heated rods 9 are used,

(b) rubber 10 is pasted on the inner surface of one of the flat rods 9,

(c) one of the flat rods 9 is formed into a triangular rod 11, and pressure is concentrated on one of apexes thereof, and

(d) heating rods 12 are both formed into rotatable round rods, between which hair is wound and drawn out.

The aforesaid iron poses problems in that the iron has a weak force to draw curly hair so that it takes time to provide a straight hair, and that even if the hair is once drawn out, it again returns to its original curly hair when shampooing is applied. This results, for example, from the fact that in types (a) and (b), the force applied to hair one by one is weak, and in type (c), pressure is merely applied from one side of hair, and if drawing pressure is increased, hair tends to be damaged. Further, in type (d), the drawing force is weak.

It is an object of this invention to provide a curly hair correcting iron which can apply strong pressure to hair, gives no damage to hair even by strong drawing force, and is free from returning to curly hair due to shampooing or the like.

According to the basic construction of an iron of this invention, as shown in FIG. 2 which shows in section rods, the iron comprises two rods containing therein heaters, respectively, one rod having its surface provided with spaced two projections which are triangular or semicircular in section, the other rod having its surface likewise provided with projections which are triangular or semicircular in section so as to be positioned between said two projections, whereby when hair is sandwiched therebetween, the hair is curved into U-shape or V-shape.

When curly hair is firmly held and pulled by the iron constructed as described above, hair is first brought into contact with the iron by the three projections, and the hair is curved into U-shape or V-shape while being fixed at said contact points thereby receiving strongly drawing action. In that state, when the iron is pulled, the hair undergoes strong pressure by the ends of the projections from both sides, and the hair is alternately bent in the opposite direction, first downward, next upward and then downward as viewed from FIG. 2, thus receiving a strong drawing. Further, since the hair is firmly gripped by the iron due to said bending, the thus drawn hair portion receives a tension at a portion where it moves out of the iron, and the hair portion is cooled and fixed while being extended.

In the accompanying drawings:

FIG. 1 is a perspective view showing the entire iron acording to this invention; FIG. 2 is a sectional view of a rod portion; FIGS. 3 (a) to (d) are respectively plan views and side views of the rods; and FIG. 4 is a sectional view showing the shape of rod of a conventional iron.

The embodiment of this invention will be described hereinafter with reference to the drawings, in which FIG. 1 is a perspective view of the entire iron, FIG. 2 is a sectional view of a rod portion, and FIGS. 3 (a) to (d) are respectively plan views and side views. The overall structure is in the form of scissors having two rods a and b containing therein heaters h, respectively, as is known.

A rod a is provided with projections 1, 2 and 3 along the opposite sides thereof. The shape of the projections can be triangular, semicircular, etc. in section, on the end of which pressure may be concentrated. A trapezoid can be employed, in which case, the width of the top surface thereof is less than 1 millimeter, and it is desirable to be substantially close to a triangular shape.

A rod b is provided in its central portion with projections 4 and 5 and in its hair end with a comb portion c.

When curly hair subjected to reducing action with a first permanent-wave liquid is held by the iron and pulled in the direction of the arrow, curly hair entwined each other is combed by the comb portion c and introduced in parallel between the rods. Then, the hair is bent and drawn up and down while being heated by the projections, and side chains of hair components are cut into straight hair. Even moved out of the iron, the hair bent and held thereon receives a sufficient slide resistance so that a strong tension acts on the drawn portion thereof, which is cooled while maintaining the form of straight hair. Then, this is fixed by a second permanent-wave liquid.

Preferably, cushion layers 6, 7 and 8 of a resilient heat resistant plastics material such as

teflon, silicone, polyamide family are provided on a rod surface portion with which the projection of the other rod contacts. These plastics layers dampen local pressure at the end of the projection due to the resilient force thereof. Moreover, even if engagement of the iron is somewhat deviated due to the resiliency, the cushion layers may absorb such deviation and apply an average pressure to the hair, which action leads to an advantage that minimizes breakage or damage of hair.

Furthermore, preferably, far infrared radiation of wavelength from 5 to 10 microns is provided from the rod surface, particularly the neighbourhood of the end of the projection. It is known that the far infrared radiation is resonance absorbed by hair to thereby provide a sufficient heating effect at a low temperature and even heating into the hair due to its permeability, and where the far infrared radiation is applied to the hair iron, denaturation of hair at a high temperature is prevented and the effect of ironing can be prolonged. In the case where the far infrared radiation is applied to the iron according to this invention, the effect of the far infrared ray may be introduced by methods such that far infrared radiation material of alumina, zircon or zircon + magnetite family is coated on the surface of each projection, or it is mixed into plastics of cushion layers.

While in the illustrated embodiment, the projections 1, 2 on the root side of hair of the rod a and the projections 4, 5 of the rod b are two in number in the respective case, it is to be noted that the number of projections may be changed into one or three, for example, and that the width of the rod may be spread to increase projections so that hair may be bent into W-shape. In this way, designs may be variously changed. Reference character d designates an electric cord.

According to the iron of this invention, as described above, curly hair may be given alternate opposite drawing while applying strong pressure thereto and sufficient tension may be caused to act, and the curly hair may be extended into a straight hair and fixed. In addition, pressurized points may be dispersed to minimize damage to hair. The hair formed into straight hair by the present iron is not returned to its original state even if shampoo is applied, thus obtaining a long-lasting effect not attained by a conventional iron.

Claims

1. A pair of hair-treatment tongs, having first and second rods which define a closable jaw to grip the hair, and heating means to heat the hair during advance of the hair through the jaw,
charcterised in that the first rod carries parallel outer elongate projections, two of which are spaced from each other and extend transversely to the direction of advance of the hair,
and in that the second rod carries at least one inner elongate projection which extends parallel to said two spaced outer projections, the inner and outer projections facing each other across the jaw and the inner projection being accommodated within the space between the spaced outer projections when the jaw is closed, whereby the hair is heated and bent under tension, first one way and then the other, during its advancement through the jaw.

2. A curly hair correcting iron comprising two rods containing therein heaters, respectively, one rod having its surface provided with spaced two projections which are triangular or semicircular in section, the other rod having its surface likewise provided with projections which are triangular or semicircular in section so as to be positioned between said two projections, whereby when hair is sandwiched therebetween, the hair is curved into U-shape or V-shape.

3. A curly hair correcting iron according to claim 1 or 2 wherein a layer of resilient material is provided on a portion of said rod surface to which contacts the projection of the other rod.

4. A curly hair correcting iron according to claim 1, 2 or 3 wherein the projection of said rod or the resilient material is caused to have a far infrared radiation property.

5. A curly hair correcting iron according to any claim wherein a comb portion is provided on the hair end of said rod.

FIG. 1

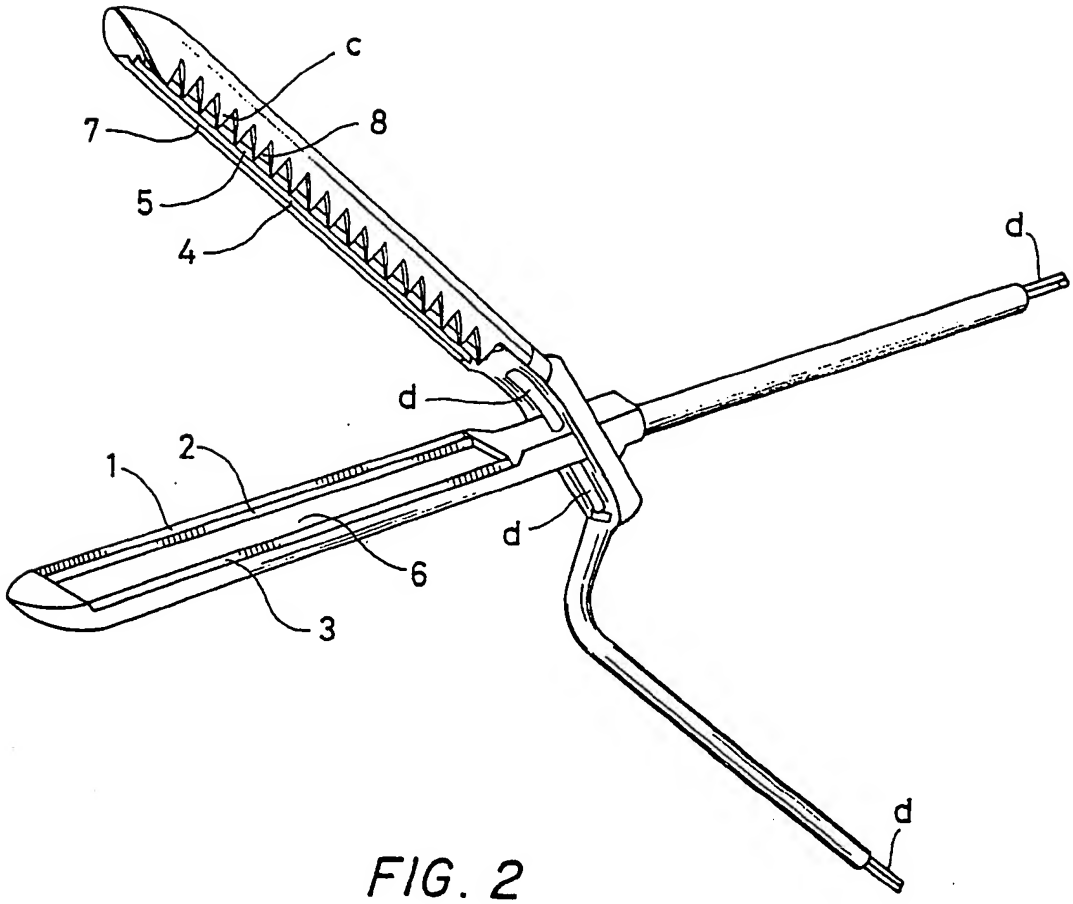


FIG. 2

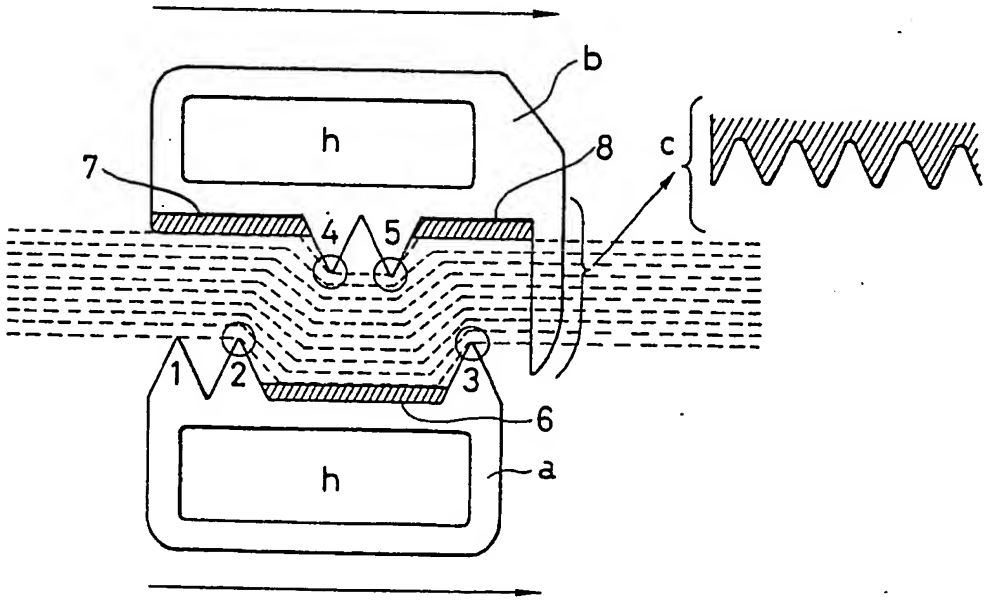


FIG. 3(a)

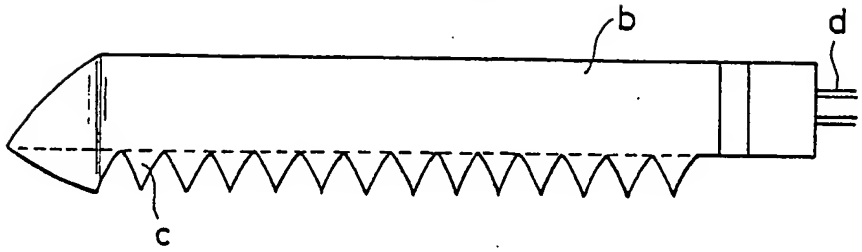


FIG. 3(b)

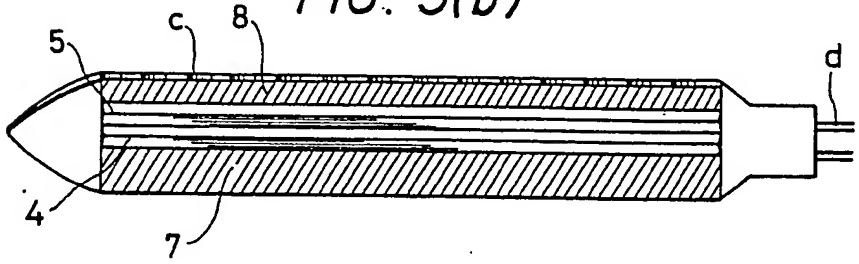


FIG. 3(c)

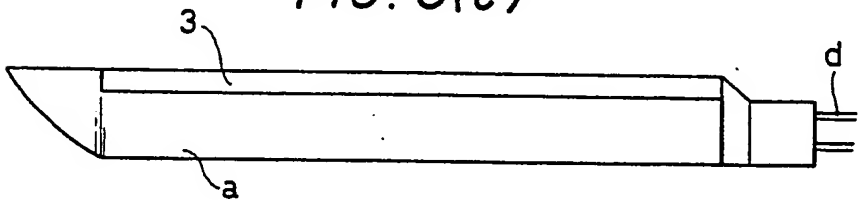


FIG. 3(d)

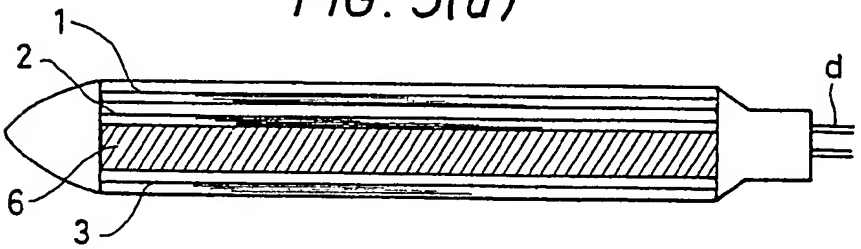


FIG. 4(a)

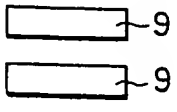


FIG. 4(b)

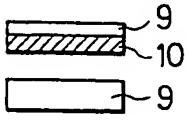


FIG. 4(c)

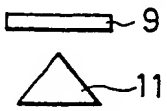
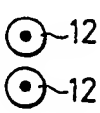


FIG. 4(d)



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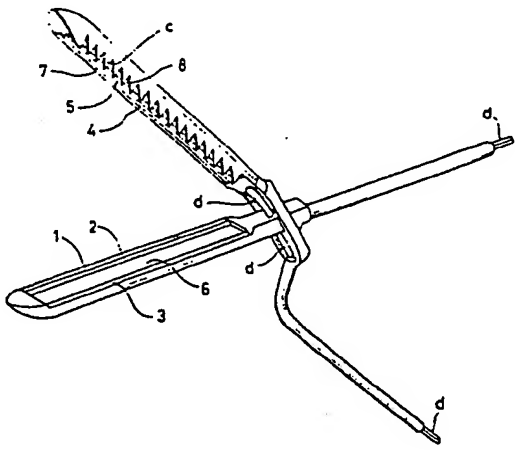

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EUROPEAN SEARCH REPORT

Application Number

EP 87 30 2024

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
X	US-A-1449632 (TALBOT) * the whole document *	1, 2	A45D2/00 A45D2/36
E	EP-A-0244522 (TAKIMAE) * the whole document *	1, 4	
A	US-A-4602143 (MACK) * column 1, line 57 - column 2, line 3; claim 1; figure 1 *	4	
A	US-A-4549560 (ANDIS) * column 1, line 18 - column 1, line 47; figures 1-3 *	3	
A	FR-A-1459160 (JOLIVET) * figure 2 *	5	
A	FR-A-2044912 (TELECKI)		
A	FR-A-2352512 (SARRA)		
A	US-A-1642251 (LANGDON)		
			TECHNICAL FIELDS SEARCHED (Int. Cl.4) A45D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	16 JANUARY 1989	VON ARX V.U.

CATEGORY OF CITED DOCUMENTS

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